

JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: YATES DRILLING COMPANY

DATE: MARCH 17, 1992

WELL NAME: Doyal No. 1

WO#: 92140408

Chaves County, New Mexico

MID-PERFS. = 2985

PACKER DEPTH = 2913

BHP GAUGE DEPTH = 2985

STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1) - (4)	(6) INJECTION RATE (gpm) (3)/34.2357	(7) MEASURED BHP (psi)
1	12:35	763.3				763.3		2067
	12:40	769.6	2.1	604.8	10.157	759.4	17.64	2054
	12:45	762.1	4.2	604.8	10.157	751.9	17.64	2036
	12:50	709.1	6.3	604.8	10.157	698.9	17.64	2022
				604.8				
2	12:55	774.6	10.1	1094.4	30.427	744.2	31.92	2051
	1:00	784.6	13.7	1036.8	27.531	757.1	30.24	2061
	1:05	789.6	17.4	1065.6	28.963	760.6	31.08	2067
				1065.6				
	1:10	866.6	22.7	1526.4	56.309	810.3	44.52	2113
3	1:15	889.3	28.0	1526.4	56.309	833.0	44.52	2136
	1:20	910.8	33.3	1526.4	56.309	854.5	44.52	2153
				1526.4				
	1:25	1000.4	40.4	2044.8	96.715	903.7	59.64	2208
	1:30	1029.4	47.5	2044.8	96.715	932.7	59.64	2236
4	1:35	1050.8	54.4	1987.2	91.735	959.1	57.96	2256
				2025.6				
	1:40	1162.6	63.5	2620.8	153.071	1009.5	76.44	2312
	1:45	1187.3	72.4	2563.2	146.905	1040.4	74.76	2339
	1:50	1202.5	81.2	2534.4	143.866	1058.6	73.92	2358
5				2572.8				
	1:55	1324.0	91.8	3052.8	202.993	1121.0	89.04	2410
	2:00	1345.5	102.4	3052.8	202.993	1142.5	89.04	2434
	2:05	1370.8	113.1	3081.6	206.550	1164.2	89.88	2452
				3062.4				
6	2:10	1492.3	125.4	3542.4	267.294	1225.0	103.32	2499
	2:15	1512.6	137.7	3542.4	267.294	1245.3	103.32	2523
	2:20	1527.8	150.0	3542.4	267.294	1260.5	103.32	2538
				3542.4				